



IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 17, 19 and 20 in accordance with the following:

1. (CURRENTLY AMENDED) A searching apparatus for searching a set of records for a combination of records, each of the records being composed of a plurality of attributes, the searching apparatus comprising:

a designating device designating a search pattern using a plurality of events and a relation of a sequence of the plurality of events and designating a pattern matching method for matching the search pattern and the combination of records, including as possible pattern matching methods, ~~and an~~ all match for returning all combinations of events that match the search pattern, a backward longest match for returning a combination of events whose interval is the longest in combinations of events that backwardly match the search pattern, and a backward shortest match for returning a combination of events whose interval is the shortest in combinations of events that backwardly matches the search pattern, each of the events defining a particular attribute of a record as a particular value, the relation of the sequence of the events being defined according to a sequential order of attribute values;

a searching device searching the set of records for a combination of records corresponding to the designated search pattern; and

an outputting device outputting a searched result.

2. (ORIGINAL) The searching apparatus as set forth in claim 1, wherein the designating device designates a search pattern of which two or more events occurred at a same time in the sequence of the plurality of events.

3. (ORIGINAL) The searching apparatus as set forth in claim 1, wherein the designating device designates a search pattern of which the relation of the sequence of the plurality of events is described at arbitrary intervals.

4. (ORIGINAL) The searching apparatus as set forth in claim 1,
further comprising a generating device collecting a set of records that contain a first attribute and a set of records that contain a second attribute and generating a set of records that contain both the first attribute and the second attribute,
wherein the searching device searches the generated set of records.

5. (ORIGINAL) The searching apparatus as set forth in claim 1,
further comprising a compressing device compressing data of at least one of the plurality of attributes so as to compress the data of the set of records,
wherein the searching device searches the compressed set of data.

6. (ORIGINAL) The searching apparatus as set forth in claim 1,
further comprising a deleting device deleting unnecessary records from the set of records according to the search pattern,
wherein the searching device searches rest of the set of records.

7. (ORIGINAL) The searching apparatus as set forth in claim 1,
further comprising a rewriting device rewriting attribute values of an attribute of the plurality of attributes that have a hierarchical structure,
wherein the searching device searches a set of records that have been rewritten.

8. (PREVIOUSLY PRESENTED) A searching apparatus for searching a set of records for a combination of records, each of the records being composed of a plurality of attributes, comprising:

a designating device designating a search pattern using a plurality of events and a relation of a sequence of the plurality of events, each of the events defining a particular attribute of a record as a particular value, the relation of the sequence of the events being defined according to an order of attribute values, and designating as a pattern matching method for matching the search pattern and the combination of records, one of a longest match for returning a combination of events whose interval is the longest in combinations of events that match the search pattern, a shortest match for returning a combination of events whose interval is the shortest in combinations of events that match the search pattern, a match for repeating the shortest match, an all match for returning all combinations of events that match the search pattern, a backward longest match for returning a combination of events whose interval is the

longest in combinations of events that backwardly match the search pattern, and a backward shortest match for returning a combination of events whose interval is the shortest in combinations of events that backwardly matches the search pattern;

a searching device searching the set of records for a combination of records corresponding to the designated search pattern using a pattern matching by the designated method; and

an outputting device outputting a searched result.

9. (ORIGINAL) The searching apparatus as set forth in claim 1, wherein the designating device includes a graphic user interface for defining the plurality of events and the relation of the sequence of the plurality of events.

10. (ORIGINAL) The searching apparatus as set forth in claim 1, wherein the outputting device outputs information about the combination of records corresponding to the search pattern.

11. (ORIGINAL) The searching apparatus as set forth in claim 1,
wherein the designating device designates a format of the searched result, and
wherein the outputting device compiles information about the combination of records corresponding to the search pattern in the designated format and outputs the result.

12. (ORIGINAL) The searching apparatus as set forth in claim 1, wherein the outputting device performs an aggregate operation for the combination of records corresponding to the search pattern and outputs an operation result.

13. (ORIGINAL) The searching apparatus as set forth in claim 1,
wherein the designating device designates an attribute used for sorting records, and
wherein the searching device sorts the set of records by values of the designated attribute and searches a set of records that have been sorted.

14. (ORIGINAL) The searching apparatus as set forth in claim 13,
wherein the designating device designates an attribute used for grouping records, and
wherein the searching device groups the set of records by values of the designated attribute and sorts records of each group.

15. (ORIGINAL) The searching apparatus as set forth in claim 1, further comprising an indexing device used for accessing the set of records according to the order of the attribute values.

16. (ORIGINAL) The searching apparatus as set forth in claim 15, further comprising a group information storing device used for accessing the set of records for each group according to values of a predetermined attribute.

17. (CURRENTLY AMENDED) A computer-readable recording medium on which a program is stored, the program causing a computer for searching a set of records for a combination of records, each of the records being composed of a plurality of attributes, to perform:

designating a search pattern using a plurality of events and relation of a sequence of the plurality of events, each of the events defining a particular attribute of a record as a particular value, the relation of the sequence of the events being defined according to a sequential order of attribute values;

designating a pattern matching method for matching the search pattern and the combination of records, including as possible pattern matching methods, ~~and an~~ all match for returning all combinations of events that match the search pattern, a backward longest match for returning a combination of events whose interval is the longest in combinations of events that backwardly match the search pattern, and a backward shortest match for returning a combination of events whose interval is the shortest in combinations of events that backwardly matches the search pattern;

searching the set of records for a combination of records corresponding to the designated search pattern; and

outputting a searched result.

18. (CANCELED)

19. (CURRENTLY AMENDED) A searching method for searching a set of records for a combination of records, each of the records being composed of a plurality of attributes, the method comprising:

inputting into a computer a search pattern designated by using a plurality of events and relation of a sequence of the plurality of events, each of the events defining a particular attribute of a record as a particular value, the relation of the sequence of the events being defined according to a ~~sequence~~ sequential order of attribute values; and

~~designating a pattern matching method for matching the search pattern and the combination of records~~ searching the set of records for a combination of records corresponding to the designated search pattern, including as possible pattern matching methods, ~~and an~~ an all match for returning all combinations of events that match the search pattern, a backward longest match for returning a combination of events whose interval is the longest in combinations of events that backwardly match the search pattern, and a backward shortest match for returning a combination of events whose interval is the shortest in combinations of events that backwardly matches the search pattern.

20. (CURRENTLY AMENDED) A searching apparatus for searching a set of records for a combination of records, each of the records being composed of a plurality of attributes, the searching apparatus comprising:

designating means for designating a search pattern using a plurality of events and relation of a sequence of the plurality of events and for designating a pattern matching method for matching the search pattern and the combination of records, including as possible pattern matching methods, ~~and an~~ an all match for returning all combinations of events that match the search pattern, a backward longest match for returning a combination of events whose interval is the longest in combinations of events that backwardly match the search pattern, and a backward shortest match for returning a combination of events whose interval is the shortest in combinations of events that backwardly matches the search pattern, each of the events defining a particular attribute of a record as a particular value, the relation of the sequence of the events being defined according to a sequential order of attribute values;

searching means for searching the set of records for a combination of records corresponding to the designated search pattern; and

outputting means for outputting a searched result.